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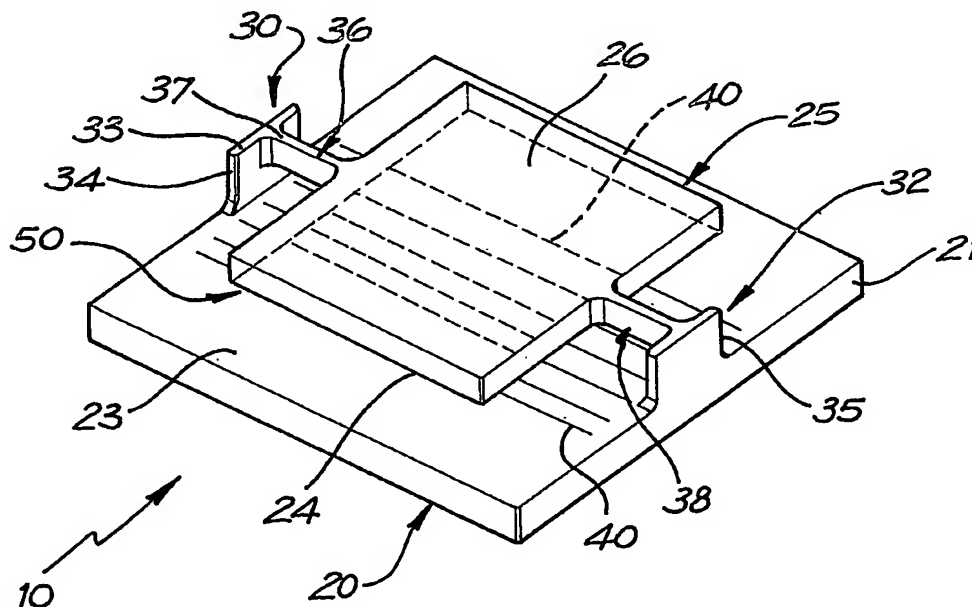
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(54) Title: **QUANTUM TUNNELLING TRANSDUCER DEVICE**



(57) Abstract: A monolithic micro or nano electromechanical transducer device includes a pair of substrates (20, 25) respectively mounting one or more elongate electrical conductors (40) and resilient solid state hinge means (30, 32) integral with and linking the substrates to relatively locate the substrates so that respective elongate electrical conductors (40) of the substrates are opposed at a spacing that permits a detectable quantum tunnelling current between the conductors when a suitable electrical potential difference is applied across the conductors. The solid state hinge means permits relative parallel translation of the substrates transverse to the elongate electrical conductors.

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